Confidential Secrets. II-37—50,006—27-10-41.

P N **(1942) Department.**

M8 **SERIES.**

G.O. No.	847
	847
Dated	21-3-1942

[Despatch Abstract.]

Aviation — Landing ground - South Kanara.

Papers Recorded.

Public Works Department.

MEMORANDUM NO.59-0/41-2, dated, 30-4-1941.

It is considered desirable to have an aviation landing ground in each district for Internal Security purposes. Enclosed is a note on the selection of landing grounds. The Collector is requested to inspect - possible sites and report on the site found most suitable with reference to the note on the selection of landing grounds. If a site is eventually licensed as a landing ground, the Executive Engineer will be the maintaining authority.

D.D.Warren,
SECRETARY TO GOVERNMENT.

To the Collectors of ANANTAPUR
NORTH ARCOT
SOUTH ARCOT
CHITTOOR
EAST GODAVARI
~~WEST GODAVARI~~
SOUTH KANARA
KURNOOL
MADURA
TANJORE

3 155

P.W.D.

I

O.M.No. 3036 F/41-3 dated 24.7.41

--

Aviation - Landing Grounds.

The attention of the Collector of Kurnool / Anantapur is drawn to Govt. Memo. No. 59 O/41-2, dated 30-4-41 and he is requested to expedite the report calle for therein.

(A landing ground 1000 yards by 1000 yards should be aimed at. Anythi less than 750 yards x 750 yards will n be suitable).

p 1107 in Kurnool Anantapur files.

of Kurnool / Anantapur.

23.7.41

23.7.41

23/7

II.

Secret

Memo. No. 3036 F/41-4 dated 24-7-41

--

Aviation - Landing grounds.

--

The attention of the Collector of Nellore is drawn to Govt. Memo. No.59 O/41-4, dated 30-4-41. The D.C.A. is the opinion that the site suggested by the Collector in 1935 in Kondayapalem village east of the Railway line is suitable. He is requested to collect necessary particulars about the site.

An expert of the Madras Flying Club will be sent to Nellore for the inspection of the site shortly.

To the Collector of Nellore.

III.

Memo. No. 3036 F/41-5 dated 24.7.41 Secret

The attention of the Collector of South Kanara is drawn to Govt. Memo. No.59 O/41-2, dated 30-4-41. It is learnt from the D.C.A. that the site referred to in Collector's letter No. Ref. B.3-817/40 dated 14-4-40 and reported on by Mr. L.A. Egglesfield of the Civil Aviation Directorate is suitable. The Coll is requested to collect all necessary particulars about the site. An expert of the Madras Flying Club will shortly be sent to Mangalore for inspection of the site and submission of a report on it.

To the Collector of South Kanara.

IV

P.T.O.

...No.3003 P/41-10.

Public Works Department,
Fort St. George, Madras,
4th August 1941.

My dear Subrahmanyan. 4(a)

Reference:-

Tyndale-Biscoe, who is a pilot authorised to act as an approved inspector in connection with the licensing and control of aerodromes, proposes to inspect the site at..... from the air. The ground should be roughly marked out as soon as possible by the Executive Engineer, Public Works Department.

Square 750 yards by 750 yards, or as near that as possible, is required. If a square of approximately that size is not available, then you may have marked out a strip 600 yards wide, at least 750 yards long, running North West to South East into which (at either end) as large as possible: (the result would be oblong ground). Please prepare a topographical sketch, to the scale, showing the proposed landing ground (with dimensions) and the surrounding country. This sketch should be sent direct to Tyndale-Biscoe, Madras Flying Club, Second Line Beach, Madras, so as to reach him within ten days from now (copy of the letter to be please). On receipt of the sketch he will intimate to you by telegram on what day and at what time he will fly over the ground. Please arrange for a smoke fire to be burning at every corner (i.e. of the proposed ground before and up to the time of his arrival. He will not land.

After his visit, Tyndale Biscoe will inform us that

(1) the ground is unsuitable or too small, or

(2) the ground could be made suitable by extension, if so, where, or

(3) the ground is suitable in all respects.

On receipt of this information, I will ask you to take the necessary action and, if the ground is suitable, to fill up the application form sent herewith.

I am to request you to give this matter your personal attention.

Yours sincerely,

(Sd.) M.C. [illegible].

M V Subrahmanyan Esq ICS
the Collector of Kanara
[illegible] to H.L. Tyndale-Biscoe, Esq.

Copy of letter from H.L.Tyndale-Biscoe Esq. Chief Pilot Instructor. Madras Flying Club Ltd., Madras.

Subject: PROPOSED LANDING GROUND.

Further to Mr. Warren's D.O. letter No.3036-F/41-10, dated 4th August, I would suggest that the proposed landing ground be roughly shown in red pencil on the "one inch" Survey of India topographical sheet, or sheets, concerned (i.e., on the one inch one mile sheets, numbered for example 57 F 14) and that this, or these be kindly sent me on loan, to enable me the more readily to locate and identify the area concerned. This would be in addition to the sketch map prescribed by Mr. Warren.

Kindly note that letters to me should be addressed to St. Thomas Mount rather than to Madras.

To W.R.Sathianadhan Esq., I.C.S., Collr. of East Godavari
Khan Bahadur S.Ahmed Ali Saheb Bahadur, Collr. of N.Arcot
C.K.Vijayaraghavan Esq., I.C.S., Collr. of Tanjore
Khan Bahadur J.Hussain, Bar-at-law, Collr. of Chittoor.
Sri Rao Bahadur D.Mahanty, M.A., Collr. of Kistna
P.Achutha Menon Esq., I.C.S., Collr. Guntur.
R.M.Sundaram Esq., I.C.S., Collr. of Salem
V.N.Kudva Esq., I.C.S., Collr. of South Arcot.
V.S.Hejmadi Esq., I.C.S., Collr., Tinnevelly.
M.V.Subrahmanyam Esq., I.C.S., Collr. of South Kanara.
M.Karamatullah Esq., I.C.S., Collr. of Nellore.
Khan Bahadur Md.Azmatullah Khan Sahib Bahadur, Collr. West Godavari.

SECRET
Camp No.47/41.

S.Kanara Collector's Office,
Mangalore, 12th August 1941.

SECRETARY TO
F
15 AUG 1941
3977
PUBLIC WORKS DEPT.

My dear Warren,

Proposed Landing Ground near Mangalore.

Your D.O.No.3036 F/41-10 dated the 4th of August 1941.

I send herewith a copy of the letter which I am sending to Tyndale-Biscoe.

I have indicated there the reasons for my suggesting his inspection of another site besides the one selected by Mr.Egglesfield previously. The letter of Mr.Egglesfield, which I have referred to there, is letter No.W.80-1 dated the 17th of May 1940 sent from the Director of Civil Aviation in India to the Secretary to the Government of Madras; the report I have referred to is the enclosure to that letter.

In a discussion which I had with the Assistant Engineer he mentioned that until a contour survey was made no kind of estimate, even approximate, could be made about the cost; the figure, 2 lakhs, which I have mentioned, was a very rough figure given by the Supervisor who prepared the sketches (at my instance, as the matter was urgent and the Assistant Engineer was away in camp) and the figure has to be taken as merely indicating the region about which the cost will range.

In my discussion with the Assistant Engineer he also stated that the time-table of operations would be somewhat as follows:- For preparing a contour survey and for working out the quantities and preparing the estimate for levelling the ground by 'cut and fill' operations, it would take 15 to 20 days for field work and 1½ months for plotting and estimating, i.e., ~~for~~ about 2 months altogether, as a full time job for a lower subordinate surveyor on a pay of about Rs.50/- per mensem. The 15th of October would be the earliest suitable time for starting the field work. The whole stage of this work would therefore be completed about the 15th of December. Estimates could be made ready within about a week after that. Allowing time for getting the orders of approval and sanction, the work

could be started about the 1st of February 1942. Work could be started then only on the softer areas leaving the harder areas to be taken up after the monsoon. The hard areas can be taken up only in August 1942. The work could be completed by about March 1943. The ground would be ready by about April 1943. The whole area barring the roads that run in it is patta land. The earlier acquisition is started and possession taken the better.

The ground near the Gurpur Travellers Bungalow is also patta land, but as I have indicated in my letter to Tyndale - Briscoe, the operations necessary to make the ground ready are very much simpler, and I think it will be only a matter of 2 or 3 months to make the ground ready. This, and the time required for acquisition and taking possession, would be all the period necessary in respect of that ground.

Yours sincerely,

D. D. Warren Esquire, I.C.S.,
Secretary to Government,
Public Works Department, Fort St.George, Madras.

9 55

SECRET
Camp No.47/41.

S. Kanara Collector's Office,
Mangalore, dated 12-8-1941.

From

M. V. Subrahmanyan Esquire, I.C.S.,
Collector of South Kanara.

To

H. L. Tyndale Biscoe Esquire,
Pilot Instructor,
The Madras Flying Club,
St.Thomas Mount.

Sir,

Proposed Landing Ground near Mangalore.

***

I thank you for your letter dated the 7th of August.

2. Early in 1940 Mr.L.A.Egglesfield of the Civil Aviation Directorate made an inspection of possible sites round about Mangalore. I send herewith a copy of his letter to the Government and of the report which he sent with that letter embodying the result of his survey of the possibilities. As the letter and the report will show, he decided that the site in the Markada village, which he has finally dealt with in detail and which is referred to as Site No.2 in the earlier portion of his report, was the only one which deserved to be taken up. I am sending you herewith a copy also of the sketch of that site which seems to have been furnished to him from this office. I am sending you also a sketch of this site on the scale 2" to the mile as required in Mr.Warren's D.O. dated the 4th of August and a sketch of the site marked on the Survey of India plan as desired by you in your letter dated the 7th of August.

3. One passage in Mr.Egglesfield's "report" puzzled me. He has mentioned there at the opening of his "report" that there are no road bridges across either of the two rivers, the Gurpur and the Netravati. He obviously has in mind the vicinity of Mangalore. On the Netravati of course the nearest road bridge is at Panemangalore about 16 miles away and he is therefore correct; but on the Gurpur river there is a road bridge between

9 and 10 miles away from Mangalore. I rather think that owing to some misunderstanding as between him and the local officers who were present with him at his inspections, he had not been made aware of the existence of this road bridge. I, therefore, considered that it would be worth-while looking out for a site on the plateau of the Gurpur hill which is about a mile and a half from this road bridge. I asked the Assistant Engineer, P.W.D., to investigate accordingly. He pitched upon a site on that plateau near the Travellers' Bungalow at Gurpur. He thought it would be possible to get a site 500 yds. by 500 yds. I would in this connection mention that in the note for the selection of landing grounds' which was sent to me by Government it has been stated that as alternatives to a ~~plateau~~ plot of 500 yds. by 500 yds. an 'L' or 'T' shaped ground might be chosen with arms of those dimensions in length and normally not less than 250 yds. in width. I went and inspected the plot along with the Assistant Engineer and I noticed that the plot as proposed by him would bring the landing ground in some places inconvenien near the cliff walls on some of the sides. We decided that a suitable ground of 'L' shape could be found in the area with dimensions 500 yds. by 300 yds. on the main arm and a further 200 yds. by 250 yds. on the other arm. My main idea in suggesting this alternative site is the saving in cost. The site selected by Mr.Egglesfield, as you will notice from his "report", requires an extensive 'cut and fill', and the cost, I understand, -though this is a very rough estimate and the P.W.D. will not commit themselves to any kind of estimate until the contour survey is made- is likely to be round about 2 lakhs of rupees. The cost of this site on the plateau of the Gurpur hill, on the other hand, would be somewhere round about - here again it is only a rough estimate- one quarter of a lakh of rupees. The main point about this latter site is that except for the cutting down of one clump of trees in the smaller arm of the 'L' and the cutting down of other stray trees on the gro and the obliteration of hedges and field boundaries and the treatment of a small outcrop of surface rock in the smaller

I am therefore sending you sketches of this site also, one sketch prepared on the scale of 1" to 5 chains, another sketch on the scale of 2" to the mile as required in Mr.Warren's D.O; and ~~the third with~~ the plot also has been sketched in on the 1" Survey of India sheet as required in your letter dated the 7th of August. I request you to be so good as to inspect this site also when you come for the inspection of the site selected by Mr.Egglesfield.

4. I shall make arrangements to keep smoke fires going at the corners of the grounds at the time of your inspection. I wish to add, however, that the season of heavy rains in this district is not over yet and heavy rains may be expected any day; if it happens to rain heavily on the day fixed for your inspection, it would not be possible to light up and keep the smoke fires on the grounds; and there is the possibility, therefore, of the inspection being infructuous altogether. It looks to me, therefore, that if the inspection is to be done this season, it would be advisable to have it done from the ground.

Yours faithfully,

17/8/11

Collector.

The Madras Flying Club, Ltd.

PATRON: HIS EXCELLENCY THE GOVERNOR OF MADRAS.

AERODROME NEAR MEENAMBAKKAM RLY. STATION
ST. THOMAS MOUNT.

TELEGRAMS: "MADFLY" MADRAS
TELEPHONE: { AERODROME 88097.
MADRAS OFFICE 3197.

P. O. Box No. 286
Madras

ASST. SECRETARY TO GOVERNMENT
24 OCT 1941
5299
PUBLIC WORKS DEPT.

M.F.C.542-2.

23rd October, 1941.

Sept. F. 24 10 41

D. D. Warren Esq., I.C.S.,
Secretary to Government of Madras,
Public Works Department,
Fort St. George,
Madras.

Dear Sir,

Under instructions from Dr. R.J. Dyson I am sending you the enclosed two letters for disposal please.

Yours faithfully,

Hony. Secy. & Treasurer.

Encls:2
S.

Mr Warren for original, pl. RAJ 23/X

4715

748

OCT 20 1941

Mangalore,
16th October 1941.

SEEN BY

Official	Initials
Asst. Sect.	
President	
Jt. Hon. Sec.	
Jt. Hon. Sec.	
P. to G. E.	

To

The Chief Aviation Officer
Madras Flying Club,
Meenambakkam, (Madras).

From

John P. Siqueira, B.A., B.L.,
Ex-Official Receiver,
"Field View," Kodialbail, Mangalore

Sir,

I have this day submitted a memorandum to the Director, Civil Aviation, New Delhi, a copy of which I am sending you herewith for your information and I hope you would be kind enough to select some spot in its vicinity for an Aerodrome on consideration of the following few additional circumstances.

There are a large number of plots suitable for Aerodromes from 10th mile onwards till the 13t mile stone on the Coast Road from Mangalore-Udipi and the levelling cost would be comparatively small. The planes from Bombay pass over this land and the proximity of sea would be a decided advantage to other plots in the District.

son Gerald Siqueira who was for 4 or 5 years in Tata's Aerodrome at Juhu and who underwent training in the Bombay Flying Club and who is just now a Pilot at Ambala in I.A.F. makes me to take so much interest in this matter and I shall be ready and willing to render you all possible assistance. I am further ready to send you a plan of the locality. The land further will not be expensive as the prices of land in this village are comparatively low.

For immediate occupation there are fine building

between the 10th to the 13th mile stone and I shall be happy to allow you the use of one of my bungalows near the sea-shore at the 12th mile stone, which can conveniently accommodate about 10 or 12 persons. The climate of the locality is ideally good and temperate throughout the year on account of the proximity of the sea- and sea-breeze blowing. The sea also is safe for bathing purposes throughout the year.

An Aerodrome near the sea-side connected with a road through which buses run throughout the day and a desire among the youngmen of Kanara to join the Air Service will be a great boon to the Country and indirectly will be a mountain of strength to the British Government during these hard times of the War.

Begging to be excused for taking the liberty of writing this letter and with my best respects,

I remain,

Yours faithfully.

John D'Souza

To

The Director,

Civil Aviation (Govt. of India)

NEW DELHI.

Through

The Collector,

Of South Kanara District.

From

John P. Siqueira, B.A.,B.L., Ex-Official Receiver and Landholder, residing in "Field View" Kodialbail, Mangalore, Dated/6th October, 1941.

Sir,

As the Officials here are moving and are inspecting lands and from information gathered from the villages, I infer that Government is looking out for a plot to construct an Aerodrome in South Kanara. I hear that they have inspected a plot in the Markada village, Mangalore Taluk, interestedly. In this connection I beg to be permitted to write the following for your consideration.

The Markada plot naturally does not provide required conditions and conveniences with the main roads and may not have any compensatory advantage in view of the enormous cost for levelling and for water supply and even the required quantity of water may not be available and thus looking into this question it struck me why I should not bring forward to your notice the best land in the hands of Government which will serve all the requirements of the Military in view and

at the same time open up a large portion of the Taluk in various ways and improve the rural condition of this benighted and totally forgotten District in the Presidency, the Military Camping ground of Surathkal, Iddya and Hospet villages reserved farsightedly by Government many years ago on account of its intrinsic military advantage known to the officials which is only 9 miles from the Town of Mangalore, well-open, extensive more or less level ground and not far from the sea, fine level road passing and connecting Mangalore in the South to Udipi in the North and through which buses pass and re-pass from morn till night. The natural condition of the land is level with a few hill topes suitable for military bungalows which ultimately may transform itself into a healthy town and thus relieve Mangalore of its congestion and its present unhealthy condition. The locality further has a Higher Secondary School and several other Elementary schools and there stands also a Roman Catholic Church and a fine Travellers' Bungalow. I have herewith submitted a plan and marking also a road half made between 11th and 12th mile connecting with Mudabidri, Moolky road via Kinnigoli and the advantage of the plot will be apparent from the plan itself. A few S.F.Nos.of Surathkal village within my information containing Government aste-land are as follows:- S.F.Nos.213, 212, 207, 245, 318, 323, 324, 341 and 315 and the extent of this alone is quite sufficient for an aerodrome.

If this plot is chosen for an aerodrome it wil

have the advantages of two ports, Mangalore in the South and Moolky in the North and the convenience of navigable rivers connecting several villages and the large unoccupied places and hills on the East and a renowned mineral water-fall at Bajpe seven miles to the East of Surathkal easily accessible by a motor-road existing and connecting Bajpe, Gurpur, Mudabidri and Surathkal but not attended to in any appreciable manner by the District Board for the past several years. Further the situation has easier and cheaper connection with Mysore and Bangalore for transport of provisions and men. Kuloor and Pavanje rivers can cheaply and easily be provided with temporary bridges as the width is not much. This vast area has got the convenience of strong laterite beds for building purposes and this is a cheap convenience for buildings for centuries. Finally as clay also is available in very large quantities an aerodrome in this locality will induce industrialists to start one or two Tile factories and thus distribute labour in the villages and will thus provide a cheaper market for tiles which are now required on a very large scale for military purposes.

On inspection, and on getting a report from P.W.D. urgently, I am confident that you will find that the place will advantageously serve all purposes and will be easily accessible by sea-planes also. The sea in front of this land is historically a religious bathing place of Hindus and resorted to by thousands of persons twice a year. Incidentally

I crave permission to mention that within the last 50 years t whales of enormous size were thrown on the shore at about the 11th mile stone where there is also a Cave in the laterite on the seaside, a premonitory sign of some important event in store for this part of the District. The bones of one whale are in the Museum at Madras and the other in the Kanara High School. The sea in front of this land is report to be an ideal fishing area where fishes of all sizes are to be found and are daily transported from here to villages and towns for sale. The extensive area being open and sea-breeze blowing is considered to be healthy. This has attracted a large number of agriculturists and labourers and on this account cheap labour will be available for any extensive work on a large scale. An aerodrome here will one day or other will prove another Juhu of Bombay and will attract many more South Kanarites to Air Service as it has already done favourably with other Districts. A German Missionary some years ago who came to give a catechetical instruction to the poor while camping there had a long conversation with me and he explained to me how Surathkal some 200 or 300 years ago was a great sea port and its natural retransformation into the present condition and eloquently spoke of the locality and their location of fine buildings at Moolky, another historically important place of the District. If I remember right he told me that there are historic records on the subject and the Book he mentioned was"Sewry's Voyages to India" and some books

in Sanskrit languages.

The question of bridging coastal rivers is already before the Government and patricularly bridging Kuloor is pressed on all sides even before the War and may have to be done urgently for the requirement of the public and this will serve for Military purposes if the place suggested by me is chosen for an Aerodrome and the District Board can be asked to take the work immediately in preference to their other proposed works.

Tata's Aeroplanes are plying this area from Bombay to Cannanore. The present plot at Harkada will never have all these lasting advantages and the buildings, etc. if for some reason or other the Aerodrome has to be shifted will fetch no market value at all. Whatever may be the views of Gandhi one intention of his improvement of the condition of the poor is pre-eminently unassailable and an Aerodrome in a Village with opportunities to extend and improve the Rural condition will universally appeal to the people and open out their eyes with regard to their duty to their country - war effort.

I have taken the opportunity of giving the above information and if it proves useful I shall feel that I am doing a duty to Government. In this connection, I beg to state my son Gerald Sequeira. who was for five years in Tata's Aerodrome as Ground Engineer was selected last year for I.A.F. and is

at present a pilot at Abela and he when coming home via Cannemore by plane, came so near this land and he informed me that the ground in this locality is admirably suited for aerodromes and this impels me to furnish this information.

I beg to remain,

Sir,

Your most obedient servant,

John Degnan

(Free Gift)

Confidential.

pp 262-263

Copy of this D.O. has been put into the W. Godavari file

M
25/10/41

H.L. Tyndale-Biscoe, Esq.,
c/o Madras Flying Club,
St. Thomas Mount.
(with enclosure).

Despd
M
25/10/41

pp 15-16 ante
~~pp 267-8 ante~~

P.W.D.

D.O. No. 3883 F/41-49 d 25/10/41

My dear Tyndale-Biscoe,

Landing grounds - W. Godavari.

I enclose for your information copy of letter No. R.O.C.Cl-819-M-41, dated 22nd October 1941 from the Collector of West Godavari, ~~and to enquire whether~~, in the circumstances reported by him, the site at Tadepalligudem may be regarded as selected.

M
25/10/41

Yours sincerely,

DDM 41.
25/10

D.O. No. 3883 F/41-50 d 25.10.41.

My dear Subrahmanyam,

Landing grounds South Kanara.

I am to enclose a copy of letter from Mr. John P.Siqueira, B.A.,B.L., suggesting sites for landing grounds between the 10th and 13th milestones of the Mangalore-Udipi Coast road, and to ask you to inspect these sites and send a report in case you wish to modify your recommendation in your letter Camp No.47/41, d/12-8-41 regarding the site on the Gurpur plateau near the travellers' bungalow.

I am also to ask you for a copy of your Endorsement on Mr.Sequeira's letter d/16-10-41 to the Director,

d 16.10.41

pp 3 ante
~~pp 267~~

pp 9-11 ante
~~pp 265 273-7~~

Civil Aviation which states that it has been forwarded through you. I presume that you will forward it through the Government.

Yours sincerely,

M.V.Subrahmanyam, Esq., I.C.S.,
Collector, South Kanara Dt.

Confidential.
R.O.C.No.6279-41-B3.

S.Kanara Collector's Office,

Mangalore, 28th October 1941.

My dear Warren,

Landing grounds - South Kanara - sites proposed by Mr.John P.Sequeira -

--

Your D.O.No.3883 F/41-50 dated the 25th October 1941.

--

The distances from Mangalore, given by Mr. John P.Sequeira, are misleading. They are by the coastal road, which is unbridged. By the through motorable road the distance from Mangalore to the sites proposed by him was too great, being more than twenty miles, and I considered therefore that the localities suggested by him were prima facie unsuitable. I sent a reply accordingly to him - a copy of which I enclose herewith. I do not think a further investigation of the matter is necessary.

Yours sincerely,

D.D.Warren Esquire, I.C.S.,
Secretary to Government,
Public Works Department, Fort St.George,
Madras.

Copy of letter R.O.C.No.6279-41-B3 dated 18-10-41 from the Collector of South Kanara to John P.Sequeira Esq.,B.A.,B.L.- Ex-Official Receiver and Landholder, residing in "Field View" Kodialbail, Mangalore.

27

Aircraft - Landing ground - Mangalore Taluk -Surathkal, Iddya and Hosabettu villages - Establishment of -

---

Ref:- Your letter dated 16.10.1941 addressed to the Director, Civil Aviation (Government of India), New Delhi.

With reference to your letter cited above, I find that having regard to the distance from Mangalore by the through motorable road, the site proposed by you will not be suitable and I do not, therefore, propose to take any further action on your letter.

(True copy)

Collector.

P. wdeph

Telegram (Express)

To

The Collector S. Kanara

Tyndale Biscoe will arrive over [the] landing grounds at Mankada and Guruvayur on Sunday [the] 14th instant [at] 2-30 P.m.

[Please] have Smoke fires burning as already instructed.

Puyadeva.

PP 90104

PP
12/12

Telegd
Pcdph 15
Cossoly
12/12

K-b
2 Colr of S. Kanara
Bpe to Mr. Tyndale Biscoe Esq
(by Sub messenger)

Tyndale Biscoe will arrive over the landing grounds at Mankada and Guruvayur on Sunday the 14th instant at 2-30 P.m.
Please have Smoke fires burning as already instructed.
12/12

Telegram

To

The Collector South Kanara

Tyndale Bicoe will arrive [the] over landing grounds at Markada and Gurpur [between] 1 and 2 P.M on [the] 15th instant. Please have smoke fires burning as already instructed

OBM 9/11 IM 9.11.42 ÖM 9.11.42

Tel. to P.C. dd. 10.11. Repeated

P. C Bgo

To the Collector of South Kanara

Copy to H.L. Tyndale-Bicoe Esq

32/

O.M. No. 3883F/41
20.1.42 Confdl

Landing grounds - S. Kanara
Correspondence relating with
Telegram d. 9.1.42

Survey of India map No. 48 L/13
returned by Mr. Iyudale, Bgloe
is forwarded to the Coll of
S Kanara.

M
19.1.42

19/1/42

To The Coll of S Kanara
with a map
(by Secret Regd)

Despatched
20/1/42

Report on sites for a landing ground seen near Mangalore on 15-1-42

The country towards the sea in the vicinity of Mangalore is characterised by a profusion of little abrupt hills with bare plateau tops. Unfortunately these tops are far from flat and nowhere could a regular airfield be laid out without an immense amount of excavation and filling, much of it involving removal of rock. Of the two sites I examined, the one nearer Mangalore, already examined on the ground by Mr.Egglesfield the D.D.C.A. early in 1940, offers the bigger area. The other site would involve much less work but is not big enough if other than light aeroplanes are to be used, and the plateau there ends on the south in a raised rocky lip which would need to be sliced off. These raised rocky lips are a feature of these plateaux and the bigger of the two areas seems to be rather bounded by them.

Of the two sites then the one nearer Mangalore is the bigger and hence the better, but the cost of levelling it, including the lips, looks prohibitive. Some 2½ miles to the northeast of the smaller area however, at about the 13th mile along the road to Mudbidri, is a large expanse of plateau that offers possibilities. A patch of it large enough to accommodate a full sized airfield could perhaps be selected where the cost of levelling would not be prohibitive.

Along the quite extensive ridge system north of Gurpur village it might be possible at relatively small cost to lay out strips in various directions, not necessarily interconnected or paying any attention to the presence of the road. The smaller of the two sites I examined might thus come in as part of an east-west strip.

I would repeat here what the Collector has already pointed out, namely that there is a road bridge across the Gurpur river. Mr.Egglesfield was under the impression that there wasn't, which prevented his consideration of possible sites north of that river along the road towards Mudbidri.

35

Confdl

Om. No. 3883 F/41 d. 23/12/42

Laundry Grounds - S Kanara
Govt's
Correspondence - Letter with telegram
d 9.1-42

A copy of Mr Tyndale-Biscoe's report on the proposed sites for laundry grounds in S Kanara is forwarded to the Collr who is requested to inspect the alternative sites suggested by Mr ~~Tyndall~~ Tyndale-Biscoe & submit a report.

23/12/42

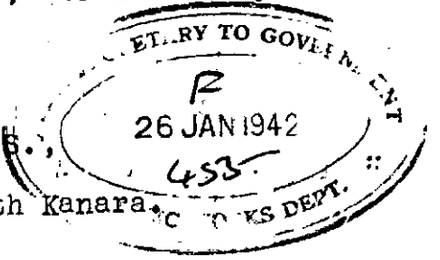
23/12/42

Letter copy of S Kanara with Encl.

Desp
23/12/42

Confidential.
R.C.C.B3-6279-41.

South Kanara Collector's Office,
Mangalore, 23rd January 1942.



From

M. V. Subrahmanyan. Esq., I.C.S.,
Collector of South Kanara.

To

The Secretary to Government,
Public Works Department,
Madras.

Sir,

Aviation - Estimated cost of scheme - Report submitted.

Ref:- Board's Reference I-757-41-7 Confdl., dated 19.1.1942.

Mr. Tyndale Biscoe inspected the two sites from the air on 15.1.1942 and has sent his report dated 19.1.1942, a copy of which is enclosed. In paragraph 2 of his report, Mr. Tyndale Biscoe states that of the two sites, the one nearer Mangalore is the bigger and hence the better, but the cost of levelling it including the lips looks prohibitive. This relates to the site at Marakada which was examined on the ground by Mr. Egglesfield the D.D.C.A. in 1940. I invite attention, in this connection, to my D.O.Camp No.47/41, dated 12.8.1941. Mr. Tyndale Biscoe further states that at about the 13th mile along the road to Mudabidri, there is a large expanse of plateau that offers possibilities and suggests that a patch of it large enough to accommodate a full-sized airfield could perhaps be selected where the cost of levelling would not be prohibitive. The Board of Revenue in its reference I-757-41-7 Confdl., dated 19.1.1942 has called for the estimated cost of the scheme urgently. In view of the report received from Mr. Tyndale Biscoe, I request to be informed whether it is necessary to ---- proceed with the Marakada ground or whether further investigation should be made with reference to the possibilities suggested by

38

Mr. Tyndale Biscoe. I have already asked the Revenue Divisional Officer, Mangalore to furnish the valuation of the Marakada site but as the sketch of the locality is with Mr. Tyndale Biscoe, the work of valuation could not be proceeded with. I am asking Mr. Tyndale Biscoe to return the sketch to me.

1/5

28/1/42

Collector.

23.1.42

Copy with a copy of report dated 19.1.1942 from Mr. Tyndale Biscoe to the Secretary to the Board, Land Revenue & Irrigation, Madras

om No. 3883-F-141 dated 27 1/2

The Madras Flying Club, Ltd.
Madras, 19th January 1942.

Report on sites for a landing ground seen near Mangalore on -- 15-1-1942.

The country towards the sea in the vicinity of Mangalore is characterised by a profusion of little abrupt hills with -- bare plateau tops. Unfortunately these tops are far from --- flat and nowhere could a regular airfield be laid out without an immense amount of excavation and filling, much of it involving removal of rock. Of the two sites, I examined, the one nearer Mangalore, already examined on the ground by Mr. Egglesfield, the D.D.C.A. early in 1940, offers the bigger area. The other site would involve much less work but it is not big ---- enough if other than light aeroplanes are to be used, and the plateau there ends on the south in a raised rocky lip which - would need to be sliced off These raised rocky lips are a - festure of these plateaux and the bigger of the two areas seems to be rather bounded by them.

Of the two sites, then the one nearer Mangalore is the bigger and hence the better, but the cost of levelling it, --- including the lips, looks prohibitive. Some 2½ miles to the northeast of the smaller area however, at about the 13th mile- along the road to Mudubidri, is a large expanse of plateau -- that offers possibilities. A patch of it large enough to --- accommodate a full sized airfield could perhaps be selected -- where the cost of levelling would not be prohibitive

Along the quite extensive ridge system north of Gurpur village it might be possible at relatively small cost to lay - out strips in various directions, not necessarily interconnected or paying any attention to the presence of the road. The --- smaller of the two sites I examined might thus come in as part of an east-west strip.

I would repeat here what the Collector has already ---- pointed out, namely that there is a road bridge across the ---

40

Gurpur river. Mr. Eggleston was under the impression that there wasn't which prevented his consideration of possible -- sites north of that river along the road towards Mudubidri.

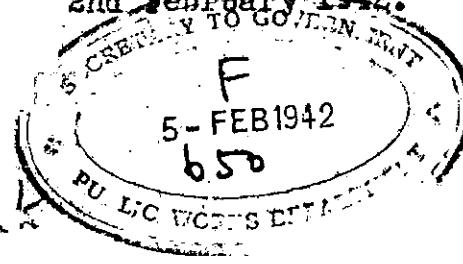
Signed/- H. Tyndale Biscoe.

(True Copy)

Collector.

THE MADRAS FLYING CLUB LTD. St.Thomas Mount,

2nd February 1942.



The Collector.
South Kanara,
Mangalore.

Sir,

Ref.your letter No.R.O.C.B3-6279-41 dated 23rd January 1942. I have already returned all maps and sketches to Mr.D.D. Warren, for kind favour of return to the Collectors concerned.

Yours faithfully,
Sd/- H.Tyndale Biscoe.
Chief Ground Engineer.

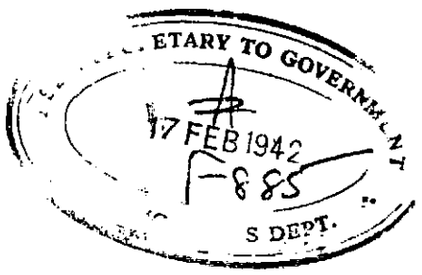
Copy to Mr.D.D.Warren.

Put

[redacted] The sketches were returned to the Collector of South Kanara on 27.1.42. See page 38 ante. File

Confidential.
R.O.C.B3-6279-41.

South Kanara Collector's Office,
Mangalore, 11th February 1942.



From

M. Karamatullah, Esq., I.C.S.,

Collector of South Kanara.

To

The Secretary to the Board,

Land Revenue and Irrigation,

Madras.

Sir,

AVIATION - Estimated cost of schemes - report submitted.

Board's Reference I -757-41-7, Confidential, dated --- 19-1-1942 and Board's Exchange Reminder dated 7-2-1942.

****

I invite the attention of the Board of Revenue to this office letter (Confidential) R.O.C.No.B3-6279-41, dated ----- 23-1-1942 addressed to the Secretary to Government, Public -- Works Department, Madras, a copy of which was submitted to the Board of Revenue. As stated therein there were two sites in view, viz., the Gurpur site and the Marakada site. The --- Assistant Engineer, Public Works Department, has sent rough - estimates in respect of both the sites. I enclose a copy of the estimate furnished by him for the perusal of the Board of Revenue None of the two sites has finally been approved. - Mr. Tyndale Biscoe, after inspection of the two sites, has -- sent his report and has proposed an alternative site which is quite different from the two sites. As directed by Government in their Memorandum No. 3883-F/41, dated 23-1-1942, --- Public Works Department, I am making further investigation -- with regard to the alternative site suggested by Mr. Tyndale

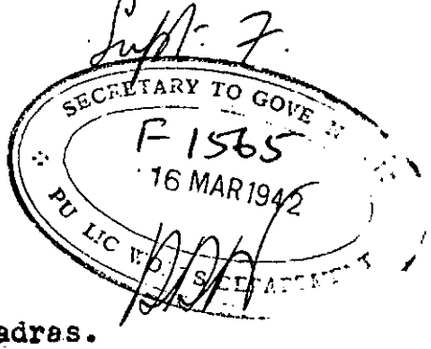
For Collector.

12.2.

Copy to the Secretary to Government, Public Works Department, Madras.

Confidential.
Roc.No.B3.6279-41.

S.Kanara Collector's Office,
Mangalore, 11th March 1942.



From

M. Karamatullah Esq.,I.C.S.,
Collector of South Kanara.

To

The Secretary to Government,
Public Works Department, Madras.

Sir,

Landing ground - South Kanara - Alternative site suggested by Mr.Tyndale Biscoe - Investigation - report submitted.

Ref:- Government Memorandum No.3883 F/41 dated 23.1.42.

In the locality suggested by Mr.Tyndale Biscoe in his report dated 19.1.1942, a full-sized ground, square in shape with each side measuring 750 yards has been selected. This site is situated in Badaga Ulipady village of Mangalore Taluk. It is situated to the east of the 13th milestone on the Mangalore-Karkal road and is about 3 furlongs away from the road. I have personally inspected the land in company with the Assistant Engineer, P.W.D. I enclose a copy of my notes of inspection. I also enclose a rough sketch and a detailed sketch showing the site selected. In the detailed sketch the site is shown shaded in green. The area of the site is about 116.30 acres out of which 12.52 acres consist of III class wet fields. The cost of acquisition of the land covered by the ground is roughly estimated at Rs.16,246/-. The Assistant Engineer has roughly estimated the cost of levelling the land between Rs.30,000/- and Rs.75,000/-.

M. Karamatullah

Collector.

Copy to the Secretary to the Board of Revenue, Land Revenue & Irrigation, Madras, in continuation of this office R.O.C.No. B3.6279-41 dated 11.2.42.

HR/12.3.

Confidential GM no. 3883 P/41 d. 19.8.42

Landing ground: South Kanara - Alternative site suggested by Mr Tyndale Biscoe - Investigation

With reference to this letter Roc. No B3. 6278-41 dated 11.3.42, the Collector of South Kanara is informed that further investigation of the site in Badaje, Belipady village should be held over till Dec. 1942

19/3

Despatched for 19/3

To the Collector of South Kanara
Copy to the Board of Revenue.

A1
With reference to Secy' notes, overleaf, the chart G.M. above is submitted for approval. After issue the papers may be

Lo no. 847 dt 21. 3. 42

Returned

19/3

Notes of inspection of the site for a landing ground at Badagaulipadi.

I have personally inspected the land in company with the Assistant Engineer, P.W.D. The square selected lies on an uneven slope rising approximately 1 in 25. The slope reaches its height about a hundred yards from the northern extremity of the square and then begins to slope gently downwards. There is a little mound about the middle of the western side and another bigger one near the north-eastern side; and an examination from the air will be necessary to determine whether the site selected will be suitable for a landing ground. It will also be necessary for an experienced pilot to examine the ground itself which has a pebbly surface. The pebbles are hard and it is possible that they might damage the propellers.

It is difficult to estimate the cost of levelling the land, as much will depend upon how far beneath the surface on an average laterite will be struck. There is an outcrop of laterite rock along the southern extremity of the land and another outcrop near the north-western corner which suggests that laterite will be struck very near the surface throughout the land. The Assistant Engineer has therefore roughly estimated the cost of levelling the land between Rs.30,000/- and Rs.75,000/-

Sd/- M.Karamatullah,
10.3.42.
Collector.

(True copy)

M. Karamatullah.

Collector.

HR/12.3.

Yours of inspection ... the site for ... ing ground
Bronze ...

I have ... ... in compli... with th...
...rt to Imper... P.W.D. ... ... square ... ...
... slope rising ... ... in 5. ... slope ...
... light ... a hum... ... the eastern extremity
of the square ... ... to slope ... away down ...
There is a little ... ... of the western ...
and another bigger one near the north-east corner also: and an
examination from the air will be necessary to determine ...
the site selected will be suitable for a ... ground. It
will also be necessary for an experience pilot to ... the ...
ground itself which has a pebbly surface. The pebbles are
hard and it is possible that they might damage the propeller.

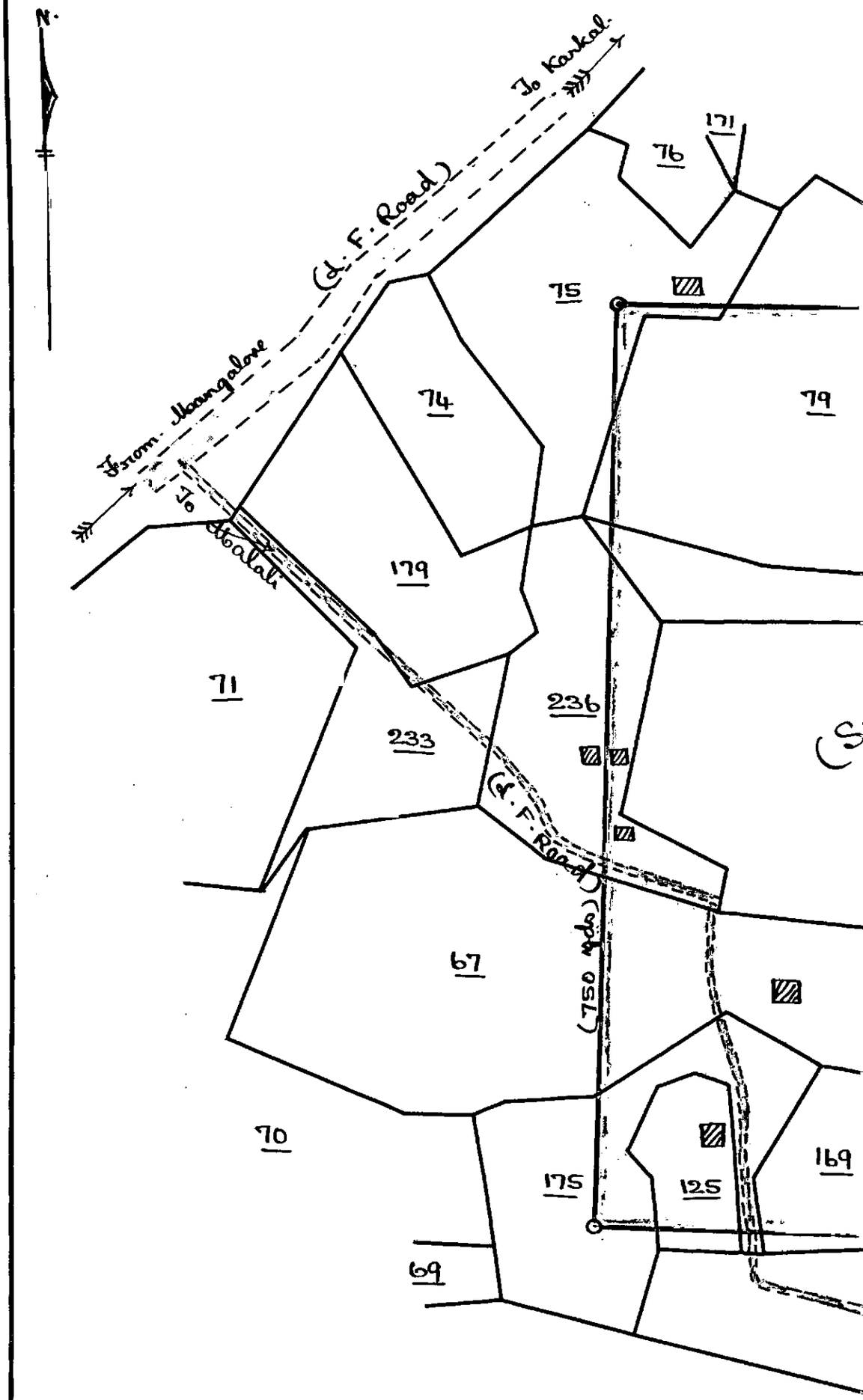
It is difficult to estimate the cost of levelling ... ...
as much will depend upon how far beneath the surface on ...
average laterite will be struck. There is an outcrop of
laterite rock along the southern extremity of the land ...
another outcrop near the north-western corner which suggests that
laterite will be struck very near the surface throughout the
land. The Assistant Engineer has therefore roughly estimated
the cost of levelling the land between Rs.30,000/- and Rs.75,000/-

sd/- M.Ramamurthi.
10.8.42.
Collector.

(True copy)

Collector.

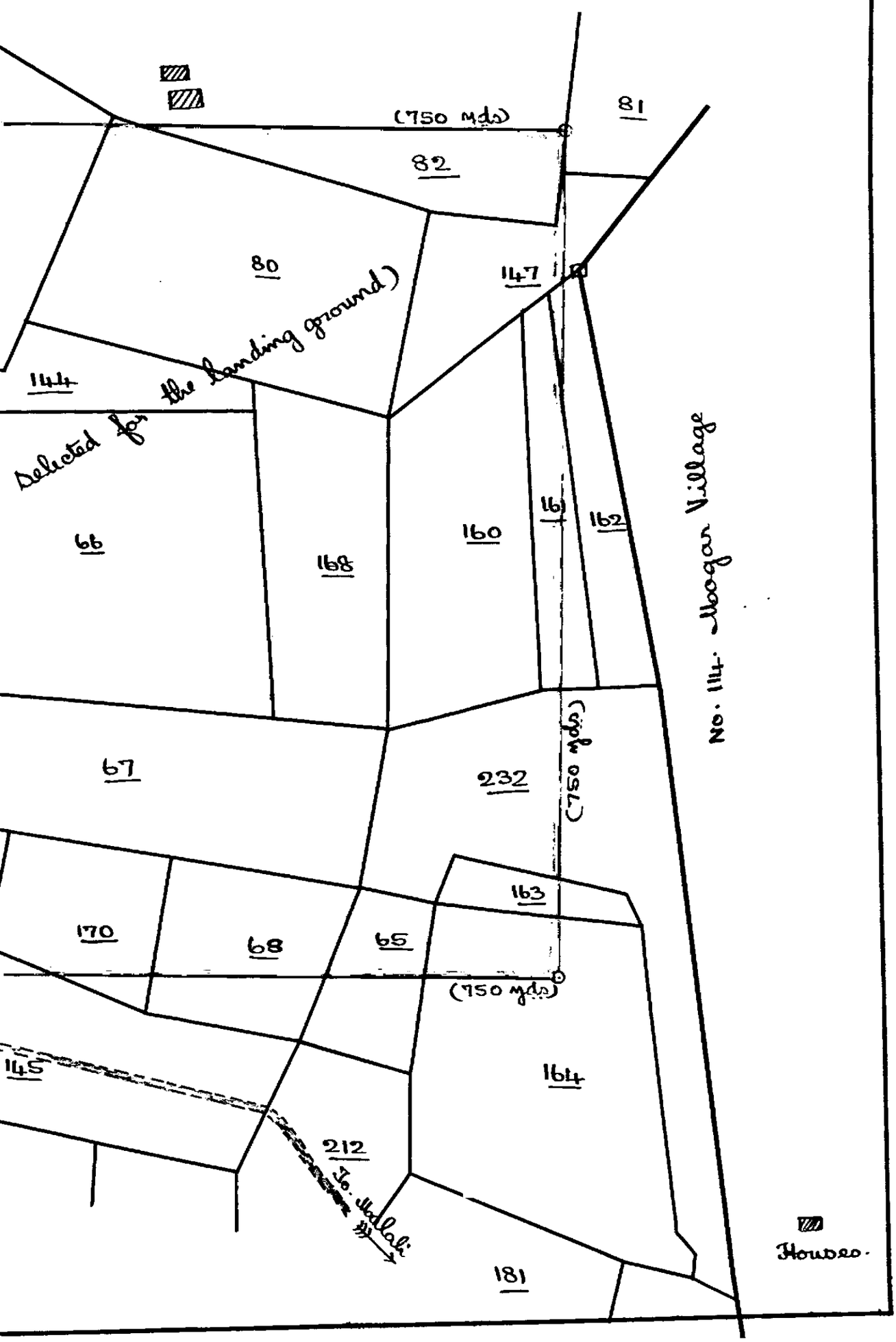
mm/12.8.



(Sd.) M. P. Krishnan Nair
12-2-42. i/c R. I.

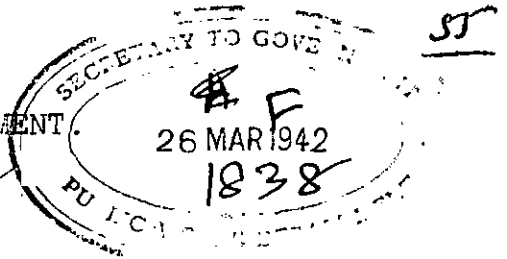
Traced by. P. Sivaraman. Draftsman. 13-3-42

District = South Kanara.
Taluk = Mangalore
Village. No. 113. Badagaulinadi
Scale 1/5 Inch = 1 Chain.



CONFIDENTIAL.

REVENUE DEPARTMENT.



Subject.

BUDGET - Aviation - Estimate for 1942-43.

Ref., I. No.757/41-12 (Confidential).

STATION: Chepauk, Madras, Dated the 25th March 1942.

From

F. W. A. Morris, Esq., I.C.S.,
Joint Secretary,
Board of Revenue,
Chepauk, M a d r a s.

To

G. W. Priestley, Esq., I.C.S.,
Commissioner of Land Revenue and Irrigation.

Read the following:-

I.

Letter from M. Karamatullah, Esq., I.C.S., Collector of South Kanara, R.C.B.3-6279/41 (Confidential), dated 11th March 1942.

REFERENCE:-

According to the report of the Collector of South Kanara cited

cited above, a copy of which was submitted to the Government direct, the estimated cost of acquisition of the new site is Rs.16,246 and the cost of levelling the land, between Rs.30,000/- and Rs.75,000/ This is in modification of his previous estimate at Rs.2,45,700/- reported in the Board's Reference I.No.757/41-10 (Confidential), dated 28th February 1942.

N Ayyaswami
25/3/42

for Joint Secretary.

To

The Secretary to Government, Public Works Department.

SECRET
Camp No.47/41.

S. Kanara Collector's Office,
Mangalore, dated 12-8-1941.

From

M. V. Subrahmanyan Esquire, I.C.S.,
Collector of South Kanara.

To

H. L. Tyndale Biscoe Esquire,
Pilot Instructor,
The Madras Flying Club,
St.Thomas Mount.

Sir,

Proposed Landing Ground near Mangalore.

***

I thank you for your letter dated the 7th of August.

2. Early in 1940 Mr.L.A.Egglesfield of the Civil Aviation Directorate made an inspection of possible sites round about Mangalore. I send herewith a copy of his letter to the Government and of the report which he sent with that letter embodying the result of his survey of the possibilities. As the letter and the report will show, he decided that the site in the Markada village, which he has finally dealt with in detail and which is referred to as Site No.2 in the earlier portion of his report, was the only one which deserved to be taken up. I am sending you herewith a copy also of the sketch of that site which seems to have been furnished to him from this office. I am sending you also a sketch of this site on the scale 2" to the mile as required in Mr.Warren's D.O. dated the 4th of August and a sketch of the site marked on the Survey of India plan as desired by you in your letter dated the 7th of August.

3. One passage in Mr.Egglesfield's "report" puzzled me. He has mentioned there at the opening of his "report" that there are no road bridges across either of the two rivers, the Gurpur and the Netravati. He obviously has in mind the vicinity of Mangalore. On the Netravati of course the nearest road bridge is at Panemangalore about 16 miles away and he is therefore correct; but on the Gurpur river there is a road bridge between

9 and 10 miles away from Mangalore. I rather think that owing to some misunderstanding as between him and the local officers who were present with him at his inspections, he had not been made aware of the existence of this road bridge. I, therefore, considered that it would be worth-while looking out for a site on the plateau of the Gurpur hill which is about a mile and a half from this road bridge. I asked the Assistant Engineer, P.W.D., to investigate accordingly. He pitched upon a site on that plateau near the Travellers' Bungalow at Gurpur. He thought it would be possible to get a site 500 yds. by 500 yds. I would in this connection mention that in the 'note for the selection of landing grounds' which was sent to me by Government, it has been stated that as alternatives to a ~~plateau~~ plot of 500 yds. by 500 yds. an 'L' or 'T' shaped ground might be chosen with arms of those dimensions in length and normally not less than 250 yds. in width. I went and inspected the plot along with the Assistant Engineer and I noticed that the plot as proposed by him would bring the landing ground in some places inconveniently near the cliff walls on some of the sides. We decided that a suitable ground of 'L' shape could be found in the area with dimensions 500 yds. by 300 yds. on the main arm and a further 200 yds. by 250 yds. on the other arm. My main idea in suggesting this alternative site is the saving in cost. The site selected by Mr.Egglesfield, as you will notice from his "report", requires ~~an~~ extensive 'cut and fill', and the cost, I understand -though this is a very rough estimate and the P.W.D. will not commit themselves to any kind of estimate until the contour survey is made- is likely to be round about 2 lakhs of rupees. The cost of this site on the plateau of the Gurpur hill, on the other hand, would be somewhere round about - here again it is only a rough estimate- one quarter of a lakh of rupees. The main point about this latter site is that except for the cutting down of one clump of trees in the smaller arm of the 'L' and the cutting down of other stray trees on the ground and the obliteration of hedges and field boundaries and the treatment of a small outcrop of surface rock in the smaller arm of the 'L', the ground even as it is would be suitable. This would mean also that the ground could be made ready in a considerably

I am therefore sending you sketches of this site also, one sketch prepared on the scale of 1" to 5 chains, another sketch on the scale of 2" to the mile as required in Mr.Warren's D.O; ~~and the third with~~ the plot also has been sketched in on the 1" Survey of India sheet as required in your letter dated the 7th of August. I request you to be so good as to inspect this site also when you come for the inspection of the site selected by Mr.Egglesfield.

4. I shall make arrangements to keep smoke fires going at the corners of the grounds at the time of your inspection. I wish to add, however, that the season of heavy rains in this district is not over yet and heavy rains may be expected any day; if it happens to rain heavily on the day fixed for your inspection, it would not be possible to light up and keep the smoke fires on the grounds; and there is the possibility, therefore, of the inspection being infructuous altogether. It looks to me, therefore, that if the inspection is to be done this season, it would be advisable to have it done from the ground.

Yours faithfully,

Collector.

Office of the Director of Civil Aviation in India.

No.W-80-1
New Delhi, Dated the 17th May 1940.

From

The Director of Civil Aviation in India,
New Delhi.

To

The Secretary to the Government of Madras,
Madras.

Sir,

I have the honour to acknowledge with thanks receipt of your letter No.2669 A/40-1 of the 2nd May with enclosures.

The plan enclosed is sufficient for the purpose for which it was required but a more accurate and detailed survey will be necessary before it is possible to decide whether it is practical to develop this site. The remarks of the Collector of South Kanara in this connection are noted. Arrangements can be made for a survey to be carried out by our own staff.

I attach for your information my report on the general possibilities of an aerodrome site at Mangalore from which it will be seen that the site selected appears to be the only possible one but that it is by no means certain, till further investigations have been made, that its development will be a practical proposition.

A copy of this letter with enclosure is being sent to the Collector of South Kanara for his information.

I have the honour to be,
Sir,
Your most obedient Servant,

Sd/- L.A.Egglesfield.
For Director of Civil Aviation in India.

warded for information to the Collector of South Kanara, Mangalore, Madras Province.

Sd/- L.A.Egglesfield,
For Director of Civil Aviation in India.

(True copy)

Collector. 17/5/40.

Mangalore Aerodrome Site.

GENERAL.

The area investigated was that bounded on the north by the Gurpur River and on the south by the Netravati River There are no road bridges across either of these rivers, the only communication being by ferry with the exception of a railway bridge across the Netravati. These rivers are reported to be frequently impassable during the monsoon and an aerodrome on the far side of either of them would therefore have practically no commercial value to Mangalore.

2. There is no natural aerodrome site in the vicinity of Mangalore. There are a certain number of low-lying paddy fields which flood during the monsoon. This land is valued at approximately Rs.2,000 an acre. The level would have to be raised at least 10 ft. and even then could not be guaranteed to be free from flooding. Runaways would be essential. This type of land only exists along the banks of the two rivers and is closely backed by hills. Even if it was considered justifiable to incur the very heavy expenditure necessary to develop a landing ground of this type - which would include something over 2 lakhs for land acquisition alone - it would be most difficult to find a suitable site. One or two possible ones were observed along the banks of the Netravati River, but as in this area road communication is reported to be frequently cut off during the monsoon due to flooding, although the road itself is raised 10 to 15 ft. above the surrounding country, these were not investigated further. The remainder of the country is a series of hills and plateaus intersected by ravines and valleys and it would not be possible to find many football grounds without considerable levelling.

POSSIBLE SITES.

3. Four sites had been provisionally selected by the Collector Mr.Woodhouse. He had unfortunately just been trasferred and left Mangalore the day before I arrived. He had however left details of these sites with his successor, Mr.Subrahmanyam.

Site No.1. About a mile outside the town on the Markada Road. An undulating plateau of irregular shape, approximately 700 yards

by 300 yards. Laterite soil. Although this site would need the least preparation, the area available is insufficient and there is absolutely no possibility of expansion as the ground falls away sharply on all sides.

Site No.2. About 4 miles out of the town and 1/2 mile east of the Marakada Road. A series of undulating fields and hillocks. Laterite soil with a few outcrops of rock. This site will be dealt with in more detail later.

Site No.3. Between 7 and 9 miles out on the Mudbidri Road. An extensive laterite plateau, very undulating, with numerous small hills of hard rock and intersected by ravines. This site has the best air approaches, but in view of the rocky and uneven nature of the ground it is considered that the production of a reasonably level aerodrome would not be a practical proposition.

Site No.4. Golf Course. A cup-shaped plateau with good approaches, but on the small side and no room for expansion. A large amount of filling would be necessary in the centre where ponds form during the monsoon. Being within municipal limits, the value of the land will be between Rs.1,000 and Rs.2,000 an acre. Discarded on account of both size and cost.

4. It was finally decided that site No.2 was the only one worth considering. The land here is generally Rs.100 per acre, so the cost of acquisition would be small. Levelling would consist almost entirely of "cut and fill" and would in fact mean demolishing two or three small hills and filling in the intervening hollows with them. The Asst.Engineer of the P.W.D. is getting out a large-scale plan of this area. If the work is done on a large enough scale, it should be possible to get 1,000 yds.in all directions, but this will need checking with the plan. It looks a very big proposition to me but the Asst.Engineer seems to think it is a practical one. A detailed contour survey will be necessary before it is possible to arrive at any estimate of the cost involved. The rates for shifting range from about Rs.5 per 1,000 c.ft. for loose earth to Rs.14 per 1,000 c.ft. for hard laterite rock. Although there is a certain amount of hard rock on the surface of one or two of the hills, it is considered that this does not go very deep and that we should come to softer stuff although still laterite. One advantage is that, being laterite, the

landing ground once it has consolidated should, with any luck, remain all-weather without runways, particularly if it is domed slightly during construction.

5. Air approaches. Approaches from west through north to south-east are good. On the southern side there is a low ridge. It may be possible to utilise some of the crest of the ridge for filling. Southerly winds are apparently unusual, so it should rarely be necessary to take off over this ridge, while approaching to land over it should not cause any difficulty as it should be possible to provide ample space for landing north of it. The south-westerly take-off would be over a valley towards slightly higher wooded ground, but I think that this ground would be sufficiently far away and should cause no interference.

6. Communication. There is a good, though narrow, reputedly all-weather laterite road up to the site. No telegraph or telephone within 2 miles.

7. Conclusion. It will be realised from the foregoing remarks that the site recommended is not by any means an ideal one but simply what appears to be the only possible one and it has now got to be ascertained whether it is a practical engineering proposition The area for which I consider a contour survey is necessary is considerably larger than that which would be actually required for the aerodrome, but until this survey has been done it is impossible to say exactly where in this area the aerodrome could most suitably be sited. As regards the time necessary to complete the aerodrome, the Asst.Engineer estimated that if he started immediately after the monsoon he could do it in one dry season. It would then need to be left during the following monsoon to consolidate. This is probably an optimistic estimate, but it of course depends largely on the amount of labour employed.

8. Weather. There are two meteorological observers at Mangalore, one of whom takes surface wind observations, barometer and thermometer readings etc. and the other takes upper wind observations. These observations are all sent to Poona, so we should ask D.G.O. for any data he has available which, incidentally from the upper wind observations, should give us some idea of the height of low cloud during the monsoon. From what the observers

tell me, it is rarely below 900 ft. except during very heavy storms. The type of weather during the monsoon, they tell me, is a series of intense rain-storms with fine intervals and it is rare for them to get consistently an overcast day with low cloud and continuous rain. The upper wind observer volunteered to go out to the proposed site daily during the monsoon and take observations as regards cloud height, etc. He would need a bicycle for this. We might also suggest this to D.G.O.

9. A plan is attached showing the area under consideration. This has been taken from the Collector's record and shows no contours although the approximate position of the hills has been roughly sketched in. The Asst.Surveyor, who is away on tour at the moment, will be asked on his return to get out a rough contour plan showing the height of the hills, etc. This will be forwarded to Delhi, but of course a detailed survey which will take some considerable time will later be necessary and will require special staff.

Sd/- L.A.Egglesfield,
5.3.40.

D.C.A.

14/3/4

Collector.